## CLAIMS

What is claimed is:

1 A method for deferring transmission of a data packet over a home network that includes a host media access controller program and a media access controller, the method comprising the steps of:

(a) transmitting a first transmit signal from the host media access controller program to the media access controller (MAC) to transmit a data packet;

(b) asserting a transmit start signal from the MAC;

(c) receiving a carrier sense signal on the MAC indicating activity on a transmission medium; and

(d) delaying assertion of a final transmit signal when both the transmit start signal and the carrier sense signal are active, thereby avoiding packet collisions.

2 The method of claim 1 further including the step of:

(a) verifying on the host media access controller program that the MAC has deferred the transmit start signal by

(i) forwarding the carrier sense signal to the host media access controller program,

(ii) evaluating the carrier sense and the transmit start signal, and

(iii) determining that the final transmit signal has not been not asserted if both the carrier sense and the transmit start signal are active.

3 The method of claim 2 further including the step of asserting the final transmit signal when the transmit start signal is active and the carrier sense signal is inactive.

4 The method of claim 3 further including the step of providing a telephone wire as the transmission medium.

5 The method of claim 4 further including the step of providing a physical layer between the MAC and the telephone wire and transmitting the carrier sense signal and the final transmit signal between the MAC and the physical layer.

6 A home network, comprising:

a host media access controller (MAC) running on a computer;

a chip in communication with the host MAC that allows the computer to communicate through telephone wires, the chip including a media access controller (MAC), and a physical layer (PHY); and

wherein the host MAC and the MAC function to defer transmission of a data packet over the home network by

the host MAC transmits a first transmit signal to the MAC to transmit a

data packet,

the MAC asserts a transmit start signal in response,

if activity is detected on the telephone wire, the PHY transmits a carrier sense signal to the MAC,

the MAC forwards the carrier sense signal to the host MAC, and

the MAC delays assertion of a final transmit signal when both the transmit start signal and the carrier sense signal are active, thereby avoiding packet collisions.

7 The system of claim 6 wherein the host MAC verifies that the MAC has deferred the transmit start signal by evaluating the carrier sense and the transmit start signal, and determining that the final transmit signal has not been not asserted if both the carrier sense and the transmit start signal are active.

8 The system of claim 7 wherein the MAC asserts the final transmit signal when the transmit start signal is active and the carrier sense signal is inactive.

9 A method for testing transmission deferral of a data packet over a home network that includes a host media access controller program and a media access controller, the method comprising the steps of:

(a) transmitting a first transmit signal from the host media access controller program to the media access controller (MAC) to transmit a data packet;

(b) asserting a transmit start signal from the MAC;

(c) receiving a carrier sense signal on the MAC indicating activity on a transmission medium, and forwarding the carrier sense signal to the host media access controller program;

(d) delaying assertion of a final transmit signal when both the transmit start signal and the carrier sense signal are active; and

(e) verifying on the host media access controller program that the MAC has deferred the transmit start signal by

(i) evaluating the carrier sense and the transmit start signal, and

(ii) determining that the final transmit signal has not been asserted if both the carrier sense and the transmit start signal are active, thereby avoiding packet collisions.

10 The method of claim 9 further including the step of asserting the final transmit signal when the transmit start signal is active and the carrier sense signal is inactive.

11 The method of claim 10 further including the step of providing a telephone wire as the transmission medium.

12 The method of claim 11 further including the step of providing a physical layer between the MAC and the telephone wire and transmitting the carrier sense signal and the final transmit signal between the MAC and the physical layer.